# PROGRESS

OF

# MEDICAL SCIENCE.

## THERAPEUTICS.

UNDER THE CHARGE OF

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### THE TREATMENT OF CHOLERA.

M. G. DAREMBERG believes that the water should be pure. Filtration by charcoal or sand is ineffectual. While porcelain filters separate the microbes, they require careful attention and should be thoroughly and frequently cleansed, using a weak solution of vinegar. Boiling the water—in spite of the cost, the dissipation of gases rendering it less agreeable for drinking, and the precipitation of the carbonates—is the best way of rendering water harmless. Sterilization or complicated apparatus is unnecessary when simple boiling answers the purpose, but the water should be used at once; chemical purification can be accomplished with small quantities of alum (15–20 to 1000), which clarifies the water and frees it from microbes after standing twenty-four hours. In time of cholera he advises the use of citric acid (60–80 to 1000), which is not expensive and does not render the water disagreeable. Tartaric or even hydrochloric acid can be substituted. The water used for cooking, cleansing the hands, face, and mouth, should be sterilized, and the food should not be touched with the hands. Artificial ice should not be used unless made from purified water. General measures against the contagion are to prevent the spreading of fæcal matter upon the soil or in streams; not to tolerate unsanitary dwellings; to drink only spring water; to disinfect by heat, sublimate, or carbolic acid, the clothing, property, and utensils of those suffering from cholera; and to treat these patients in special hospitals. Milk should be boiled, or better, sterilized in Soxhlet's apparatus, if it is to be preserved for twenty-four hours. Butter should be avoided. Fruits and vegetables which have touched the earth should not be eaten raw. Excessive fatigue and chilling should be avoided; one should be well protected day and night; it is prudent to wear a band of flannel. A regular diet is important, and indigestion is to be avoided; a good supply of normal gastric fluid contains acid which is a protection against cholera, because the microbe is killed by acids. Cholera is transmitted by contact, therefore all contact with patients, their attendants, utensils, or clothing may result in infection. Frequent washing of the hands is of incontestable usefulness. Brushing the teeth several times daily with a brush moistened in boiled water, followed by washing the mouth with water containing citric acid, is important. Disinfected water should be snuffed through the nose. One should keep away from sewers and from streams polluted by sewage. In a word, cleanliness and temperance will give but little opportunity for becoming the prey of this disease. If in a house with cholera, all stools, urine, vomited matter should be treated with one to four teaspoonfuls of commercial sulphuric acid. All vessels should be washed with a 2 per cent. solution of this acid. All clothing and linen should be placed in boiling water for a quarter of an hour, then soap should be thoroughly brushed into them. The attendants should wash their hands in a 1 to 10,000 solution of corrosive sublimate, to which one-tenth of 1 per cent. of hydrochloric acid is added, or with a weak solution of carbolic, salicylic, or lactic acids. If death takes place, the mattress and coverlets and hangings should be burned. The room and adjacent rooms should be hermetically closed and sprayed for two hours with corrosive sublimate, 1 to 1000, and then kept open for two or three days before occupancy. Diarrhœa should be arrested at once with fifteen grains of subnitrate of bismuth and ten grains of benzo-naphthol three times daily. If this is insufficient, fifteen grains of salol before each meal, which should consist only of eggs and meat. If cholera is established, one drachm of lactic acid should be dissolved in a pint of sweetened water and a claret-glassful taken every two hours. For the vomiting, champagne by the dessertspoonful, or brandy by the teaspoonful every hour. Thirst is relieved by tea, coffee, or citric or hydrochloric acid lemonade (1 to 200 of sweetened water). Liquids should be given in small quantities frequently repeated. Opiates must not be prescribed. The patient must be kept warm by bottles of hot water. The room should be airy but free from draughts. If improvement does not follow, intra-venous injections should be made of chloride of sodium, 5; sulphate of sodium, 10; to distilled water 1000, heated to blood heat, and two quarts used. The transfusion frequently produces a veritable resurrection, and often this improvement is permanent.—*La Médecine Moderne*, 1892, No. 33, p. 517.

DRS. H. NOTHNAGEL and O. KOHLER caution against allowing any dyspepsia and especially any catarrhal conditions to go without remedy, and advise, as a prophylactic, eight to ten drops of hydrochloric acid in a quarter of a glass of boiled water after each meal. For the diarrhœa they recommend rest in bed, warm abdominal compresses, and tincture of opium with tea or rum, cognac or arrack. Bismuth subnitrate or salicylate, or alum, may be of use. For the vomiting, the carbonic acid waters—not alkaline—are useful. For the well-developed attack, high rectal irrigation with an ounce of tannic acid to the quart of boiled water. In the stage of asphyxia one or two quarts of sterilized water containing ninety grains of carbonate of soda and two drachms of chloride of soda, for subcutaneous injection into the abdominal wall. For the symptomatic treatment, champagne, strong wines, with the addition of ten to twenty drops of ether, or subcutaneous injection of one part of camphor in nine of oil of sweet almonds, warm baths, friction with alcoholic solutions; and for the cramps of the muscles, morphine hypodermatically.—*Internationale klinische Rundschau*, 1892, No. 35, S. 1426, and *Wiener medicinische Presse*, 1892, No. 32, S. 1273.

Dr. Eckstein recommends the needle of Dürssen for massive hypodermatic injections of physiological saline solution in cholera. This needle has upon its proximal extremity an olive upon which a tube can be placed. The distal end is obliquely cut off, pointed, and has two additional openings on the side. The rubber tube is furnished with an intermediate glass tube, a bulb, and the end which is inserted into the receptacle for the injection fluid terminates in a glass tube of sufficient length to reach the bottom.—*Prager medicinische Wochenschrift*, 1892, No. 35, S. 407.

### Haffkine's Method of Protective Inoculation against Cholera.

Mr. E. H. Hankin, having received in his own person the protective inoculation at the hands of M. Haffkine, gives an account of his experience. By cultivating the vibrio of cholera, first in diluted and then in undiluted rabbit's serum, it can be acclimatized so that it will be unharmed by the bactericidal action of this medium. Injections of a small quantity of a culture in rabbit's serum of these acclimatized vibrios into the veins of a rabbit results in death with the marked symptoms of cholera, and the post-mortem examination shows that the intestine is filled with "rice-water" secretion, which, as well as the mucous membrane of the intestine, contains the vibrios in large numbers. In some cases they have been found in the bile-duct and ureter, but never in other parts of the body. By passing the microbe through a series of guinea-pigs a *virus fixe* or *virus exalté* is obtained, generally between the twentieth and thirtieth passage. This *virus exalté* appears to be about twenty times as virulent as the ordinary form of the microbe. The attenuated virus is prepared by growing the microbe in a slow current of air. A flask of bouillon placed in an incubator is inoculated with microbes, which produce a culture and then rapidly die. It is therefore necessary to re-inoculate them every third day into a fresh flask, when it is found that after each passage they are more and more attenuated. Rabbits, then, are made immune by successive inoculations of attenuated and of the strengthened virus. In his personal experience the inoculation with attenuated virus caused the usual local œdema with some fever and malaise. Five days later the injection of *virus exalté* was made without marked symptoms save pain. In order to test the presence or absence of local immunity, five weeks after inoculation an injection of strengthened virus was made, which produced the same results as the attenuated virus did in the first instance. Of the questions that suggest themselves: whether immunity against one variety of cholera microbe will confer immunity against another, has been answered in the affirmative, so far as guinea-pigs are concerned; whether this treatment will confer permanent immunity can receive no definite answer, but it is more probable that an inoculation with *virus exalté* should confer lasting immunity than a slight attack of cholera. It is important to remember that very probably after the first inoculation, less probably after the second, there may be a temporary diminution in the power of resisting the entry of cholera microbes, so that inoculations should not be practised at a given place at the time that an epidemic is raging, without great caution. At present this method is not attended by any grave disturbance of health, and it can be practised upon human beings with perfect safety. The fact that it produces immunity against cholera in any form in animals of such widely different organization as guinea-pigs and pigeons, gives reason for hoping that it may produce an equally good effect in human beings, but it must necessarily be a long time before we can possess any direct evidence of any value on this point.—*British Medical Journal,* 1892, No. 1654, p. 569.

## FILTERED OR BOILED WATER?

M. A.-J. MARTIN, under this title, presents a very carefully studied paper. Recognizing the fact that many filters, so far from separating the bacteria, may even make the water richer in these organisms, this method cannot be recommended. Boiled water has lost its carbonic acid gas, and the salts of lime and magnesia are precipitated; the taste is flat, although on standing in a cool place it reabsorbs the greater portion of the lost gas. Even boiled water ought not to be long preserved. The problem apparently was solved in heating the water without loss of air, cooling it mechanically, and adding oxygen by means of an air-pump, or it can be boiled in closed bottles. Various ingenious apparatus has been devised for boiling water in closed vessels under pressure, and ;cooling it in the same apparatus. Investigations have shown that the slight differences observed in the chemical composition of the water before and after sterilization have not altered its potability. With a filter, one can drink only the water of which he knows the source; with boiling, one can use any water. Boiling, then, should be the procedure of choice as soon as any suspicion arises; it should be the rule, especially in large cities, during the progress of any epidemic.—*Gazette hebdomadaire de Médecine et de Chirurgie,* 1892, No. 37, p. 433.

## THE DIGESTIVE FERMENT OF THE CARICA PAPAYA IN GASTRO-INTESTINAL DISORDERS.

DR. FRANK WOODBURY suggests the name "caricinum" or "caricin" for the papain of Finckler. Its physiological actions have been established to be upon albuminoids, hydrating them and converting them ultimately into peptones, converting with great promptness starch, the ultimate product being maltose, emulsifying fats, and possessing a direct tonic action upon the stomach, stimulating the secretion of gastric juice or pepsinogen, being also distinctly antiseptic, and given with true antiseptics, like salol, will not leave the digestive action checked. Even corrosive sublimate in dilute solutions does not interfere with its digestive powers. It acts at all temperatures, best in alkaline solution, but also in fluids with an acid or neutral reaction. It has no action upon living tissues and is positively innocuous when swallowed in any quantity that is likely to be administered. He summarizes its use as follows: 1. In actual or relative deficiency of gastric juice or its constituents. *a.* Diminished secretion of gastric juice as a whole: apepsia, anæmia and deficient blood-supply, wasting disease. *b.* Diminished proportion of pepsin: atonic dyspepsia, atrophy of gastric tubules. *c.* Diminution of hydrochloric acid: achlorhydria, carcinoma. *d.* Relative deficiency of gastric juice: overfeeding. 2. In gastric catarrh. *a.* When there is tenacious mucus to be removed. *b.* When there is impaired digestion. 3. In excessive secretion of acid. To prevent duodenal dyspepsia. 4. In gastralgia, irritable stomach, nausea, or vomiting. 5. In intestinal disorders. *a.* In constipation due to indigestion. *b.* In diarrhœa, as a sedative. *c.* In intestinal worms [not verified by author]. 6. In infectious disorders of the intestinal tract. *a.* When there is abnormal fermentation. *b.* As a detergent in cleaning out the débris. 7. In infantile indigestion. The dose is one or two, possibly five grains, either alone or combined with bicarbonate of soda, extract of nux vomica, or both.—*New York Medical Journal*, 1892, No. 713, p. 115.

### THE TREATMENT OF SEA-SICKNESS.

**DR. W. W. VAN VALZAH** believes in Rochet's theory, that the symptoms of sea-sickness are those of cerebral anæmia, as a result of deranged and diminished reflex muscular tonicity of which the loss of equilibrium is a sign. The treatment is directed to the digestive system, having one important object in view—to diminish the irritability of the sensory nerve-endings of the mucous lining of the alimentary canal by keeping the digestive tube functionally active and clean. This is accomplished by laxatives, limitation of sweets and starches, and the use of lean meats. During the first forty-eight hours on shipboard the patient is to rest in bed and sleep if possible, four light meals to be taken each day, and very little fluid drunk, a single cup of hot water with each meal. At the expiration of this period, the time, except that regularly given to sleep, should be spent in the open air, and the sensory vertigo supplanted by purposive movements as walking, and by mental occupation or diversion. An efficient treatment is that of bromide of sodium, which should be pushed to its physiological effects and its influence continued during the voyage. During the attack, if hyperæmia be present, the vertical position, a hot foot-bath, ice to the head or spine, possibly caffeine, antipyrine, or bromide of soda. If anæmia, atropine with nitro-glycerin, sometimes strychnine, and natro-benzoate of caffeine, or ergotin may be useful. The horizontal position, whiskey (and food also) by the rectum, copious draughts of hot water, are advised. Frequently repeated and small doses of creasote, with lime-water and an infinitesimal quantity of ipecac, or oxalate of cerium in hourly five-grain doses, may be effectual in relieving vomiting, If these preventive precautious and remedies fail, the patient must content himself until he can again get into his element—the place where he was created and educated to live—on land.—*New York Medical Journal*, 1892, No. 715, p. 179.

### BROMIDE OF STRONTIUM IN THE TREATMENT OF VOMITING.

**DR. GIUSTO CORONEDI**, on account os the deliquescence of this salt, prescribes it to be dispensed in glass tubes closed by a cork, each containing fifteen grains. He ascertained that the usual amount of free hydrochloric acid in the stomach does not set free bromine, but the remedy acts as a bromide. The daily dose employed in ten reported cases was sixty grains, or fifteen grains for a dose. It was more successfully employed in various gastralgias, nervous vomiting, that of pregnancy, of reflex irritations, when it acts as other bromides, diminishing the excitability of the nervous centres, and of the nerve terminations in the stomach, and preventing reflex action, although containing a smaller percentage of bromine than either the sodium or potassium salt. Apparently more active than the other salts, it does not present the disadvantages of the potash salt; for example, the diminution of nervous and muscular energy after long-continued use.—*Lo Sperimentale*, 1892, fasc. 3, p. 222.

### THE TREATMENT OF TYPHOID FEVER BY THALLIN.

DR. FRANZ SCHMID has treated twenty cases, with two deaths. The diet was milk, animal broths, with eggs and alcohol. At the outset calomel was administered, and as soon as the diagnosis was established the sulphate of thallin, in 1 or 2 per cent. aqueous solution, was administered every hour from six in the morning until nine at night, and in the night at two or three hour intervals. The initial dose was from one and one-half to three grains. This dose was increased every second or fourth hour by sixths of a grain until the temperature approached the normal or a little below it. This amount of the remedy was continued for from three to five days, then gradually diminished so long as the temperature remained about the normal. When it became subnormal the drug was omitted until it began to rise. The average duration of the use of this remedy was 16.8 days. Of the two fatal cases, in one the autopsy showed a fatty heart and very large spleen; in the other, a perforation near the ileo-cæcal valve. He concludes that: 1. Thallinization in typhoid fever is of equal value with hydro-therapeutic treatment, especially in severe cases and at the acme of the disease; 2. In the use of thallin it should be given in large doses, as above stated, increasing rapidly to an efficient dose, and avoiding variations in it.—*Correspondenz-blatt für Schweizer Aerzte*, 1892, No. 17, S. 529.

### THE OCCASIONAL DANGER OF ANTIPYRETICS IN TYPHOID FEVER.

DR. J. H. MUSSER would hesitate to use any antipyretic during the first twenty-four hours after a patient is admitted to the hospital, for the rise of temperature is due to exhaustion, and this requires stimulants. Certain patients have idiosyncrasies which forbid the use of these remedies, no matter how high the temperature may be, if life be not threatened. In the later stages antipyretics are especially dangerous, and must be administered with the greatest care. He calls attention to cases of persistently high temperature, with abatement of all other symptoms, cases in which the morbid process has terminated, but on account of exhaustion, long continuance in bed on the limited diet, the use of an antipyretic would have been of no avail. These cases need stimulants, solid food, and getting the patient out of bed.—*Transactions of the College of Physicians of Philadelphia*, 1892.

### A NEW METHOD OF TREATMENT OF FEVER.

DR. SOLTAU-FENWICK describes his ice-cradle, which he has used in connection with sponging off the patient with warm water, in a hundred cases of typhoid fever and in one hundred and fifty-three of acute inflammation of the lungs. The skin is sponged with warm water, at about the temperature of 116° F., for ten minutes. The warm water was found to be pleasanter for the patient and frequently of greater antipyretic value. The fevers which do not respond to this treatment are frequently of unfavorable prognosis. The ice-cradle is an apparatus similar to that of the same name which is used in surgical wards for protecting the fractured limbs from the pressure of the bed-clothing, except that it extends the entire length of the body, and is sufficiently high to allow pails containing ice to be suspended from the hoops. Linen is placed over the bottom of the pails to prevent the condensed moisture from dripping upon the patient. Hot water containers can be placed at the feet if necessary. He concludes: 1. Temperatures of 103° F. can be reduced from one and a half to three degrees, and kept at that point. If the temperature is 105° F., or higher, cold baths or ice packs should be employed. 2. This remedy is extremely simple in its use, and entirely free from danger. 3. To obtain the highest degree of antipyretic effect, the greatest attention to details, and that a thorough draught through the apparatus be maintained.—*Berliner klinische Wochenschrift*, 1892, No. 31, S. 767.

### SYPHILIS OF THE LINGUAL TONSIL.

DR. JAMES E. NEWCOMB reports a case in which the cure of this disease, which was characterized by nipple-shaped, grayish-red protuberances composed of groups of closed and inflamed follicles, with ulcerated summits and crowned with typical, clean-cut, mucous plaques, was complete in five weeks. Applications of the dilute acid nitrate of mercury, a sublimate gargle, and mixed treatment internally were employed.—*The Medical News*, 1892, No. 1016, p. 4.

### ON BLISTERS AND BLOODLETTING IN PLEURISY AND PNEUMONIA.

M. P. DUROZIEZ presents much clinical evidence in favor of the retention of these methods in clinical work. In pneumonias, the age determines bloodletting; after forty-five years of age the results are very unfavorable, and in women the gravity of this disease is admitted. In pleurisy the fatal cases are fewer as the bloodletting becomes more frequent, although alcoholic individuals bear it badly. Blisters are of apparent usefulness in both of these diseases.—*L'Union Médicale*, 1892, No. 76, p. 3.

### THE HYPODERMATIC INJECTION OF IODOFORMIZED GUAIACOL IN PULMONARY TUBERCULOSIS.

DRS. R. MASSALONGO and S. SILVESTRI believe that with a combination of these well-tried and approved remedies (1 part iodoform, 5 parts guaiacol, to 100 of sterilized oil of sweet almonds) injected into the scapulo-vertebral space, or, better, into the supra-spinous fossa, they obtained satisfactory results in eight reported cases. They conclude that it is especially indicated in the first, second, and rarely in the third stages; that the cough, expectoration, number of bacilli, fever, night-sweating, appetite, weight, and general appearance are improved; that these results are justified by the physiological properties, antiseptic, astringent, and modifying, of these drugs; that no other pharmaceutical curative method has yielded so satisfactory results.—*Gazetta degli Ospitali*, 1892, No. 86, p. 802.

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### DYSPNŒA AND ITS TREATMENT BY DRUGS.

DR. W. TENNANT GAIRDNER classifies his cases as—1. Due to hæmatic causes, remedied by iron, arsenic, hygienic conditions, food, exercise, possibly by inhalations of oxygen. 2. Due to pulmonary causes, when expectorants are indicated, stimulating the "scavenger muscles" of the bronchial tubes, avoiding the use of opium. 3. Due to extra-pulmonary causes other than hæmatic, as cardiac, pleural, or pericardial effusions; dropsical swellings of all kinds; uræmic, when this origin must be carefully considered; and in general the maxim of Baglivi should be observed, to use diuretics, or in the failure of these, to employ drastic cathartics, or rarely venesection.—*Medical Press*, 1892, No. 2779, p. 131.

PROF. LEECH finds that the nitrites will relieve certain forms of dyspnœa, and his preference is for the nitrites of ethyl and soda and nitro-glycerin, as more effective and of more lasting influence than nitrite of amyl. A teaspoonful of a 3 per cent. solution of nitrite of ethyl is the most convenient form for administering a nitrite in dyspnœa. In case of failure with the nitrites he advises the vapor of ammonia.

DR. HANDFORD believes that the dyspnœa of migraine can be speedily relieved by saline aperients.

DR. OLIVER regards the use of morphine to be beneficial in some cases of bronchitis and of emphysema, accompanied by orthopnœa. In uræmic dyspnœa the nitrites were of very great service, but he would limit venesection to those cases in which dyspnœa was dependent upon, or associated with, dilatation of the right heart.

DR. WILBERFORCE SMITH advises in spasmodic paroxysms, belladonna, preferably a few drops given with little or no water, or administered by a spray-producer; in congestive cases, the cautious use of the hot-air bath; in the dyspnœa of anæmia (in girls), the prohibition of corsets.

MR. FREDERICK PEARSE, in acute spasmodic asthma, and in that associated with tumultuous action of the heart, recommends one or two five-minim doses of Fleming's tincture of aconite.—*British Medical Journal*, 1892, No. 1649, p. 295.

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### THE TREATMENT OF MYXŒDEMA WITH THYROID JUICE.

MR. G. R. MURRAY reports four cases treated by this method. The thyroid glands are removed from several sheep just before they are killed; each lobe is minced, bruised in a mortar, and allowed to stand for twelve hours in fifteen minims of glycerin and the same quantity of a one-half of 1 per cent. solution carbolic acid in boiled distilled water. It is then squeezed through a cloth in a press, which, as well as all other apparatus, has been cleansed by boiling water and a 5 per cent. carbolic acid solution. In the future it is proposed to use the liquefied carbonic acid apparatus of M. d'Arsonval. Twenty-five minims of this extract have been injected, with antiseptic precautions, beneath the skin of the inter-scapular region once a week. It may be advisable to give a smaller injection and repeat it more frequently in some cases.

The injection should be slowly administered, five minutes being required for the process; stopping the process if the patient begins to flush, suffers from nausea, or has stabbing pain in the lumbar region. No pressure should be made over the seat of the injection. These cases show that thyroid extract can, to a very considerable extent, supply the place of the natural secretion which is lost in myxœdema. The patient's condition can be much improved, and this improvement can be maintained so long as the treatment is continued. The unpleasant symptoms can be obviated by more slowly injecting the fluid, and the danger of abscesses avoided by strict asepsis. The cases with signs of cardiac degeneration should either not be selected for treatment, or they must be specially warned not to take any unusual exercise when the improvement takes place.—*British Medical Journal*, 1892, No. 1652, p. 449.

### A CASE OF EPILEPSY CURED BY INJECTION OF PASTEUR'S ANTIRABIC LIQUID.

DR. GIOVANNI ACHILLE reports a carefully observed case of a man who for three years has suffered from *grand mal* and consequent mental symptoms, so that it was necessary to place him in the hospital. The treatment lasted ten days, and ended the attacks, which came on several times daily, with intervals of freedom for a few days. The cessation of the disease was accompanied by great improvement in his mental condition.—*Gazetta degli Ospitali*, 1892, No. 87, p. 811.

### THE TREATMENT OF DELIRIUM TREMENS.

DR. NORMAN KERR believes that this condition is the effect of alcoholic poisoning, and due to the cumulative specific action of the poison on the cerebral tissue through the alcoholization of the blood. Therefore this poison should be eliminated by liquor ammonii acetatis in drachm doses every hour, avoiding all narcotics and the administration of alcoholic liquors. Milk, beef-juice, broth, and coffee should be frequently given. In this way we give the *vis medicatrix* "a fair field and no favor."—*Medical Press*, 1892, No. 2779, p. 135.

### THE USE OF VEGETABLE ALBUMIN IN THE DIETETIC TREATMENT OF DIABETES MELLITUS.

DR. WILHELM EBSTEIN recommends aleuronat, a dry, yellow powder, almost without any taste or odor, which consists chiefly of vegetable albumin, made by the secret process of Hundhausen. This powder can be used for the same purposes as is flour by the non-diabetic person. Bread can be made containing at least one-half of this substance. The danger of a pure or entire albumin food, as shown by the appearance of acetone or aceto-acetic acid in the urine, must be recognized. Light cases of this disease should have this diet more strictly enforced; but in the more serious forms, especially those accustomed to a poor food, lacking in albumin, he employs a nutrition which is richer in albumin, quite gradually. In place of sugar, he uses levulose, chemically pure and especially free from dextrose, which may, in the course of time, supplant the often disagreeable saccharine. Taking a considerable amount of fat may limit also the necessity for a larger quantity of carbohydrates.—*Medical Chronicle*, 1892, No. 6, p. 361.

### MERCURY SOZOIODOL.

DR. K. WITTHAUER has made use of this preparation, which contains 31 per cent. of mercury and 38 per cent. of iodine, in the form of ointment, dusting-powder, and in emulsion. As an ointment he employs a 1 per cent. solution in 90 parts of lanolin and 10 of olive oil, spread upon strips of linen, closely applied to the ulceration, and changed as often as the discharge comes through the dressing. As a powder, it is diluted with 99 parts of talc. In tubercular fistulas or other inaccessible ulcerations, he employs a 1 per cent. emulsion in 8 parts of glycerin, 4 parts of gum arabic, and 88 parts of distilled water. This is injected every three or four days to the amount of 15 to 30 drops, into the fistulas, and the openings covered with gauze, drainage being used when necessary. In using the emulsion as an injection into closed fungous joints, it gives rise to less pain than iodoform, and only a slight fever or none at all. Double the quantity above can be used.—*Münchener medicinische Wochenschrift*, 1892, No. 34, S. 602.

### DERMATOL.

DR. ARTHUR K. STONE reports that he has had very satisfactory results. Subgallate of bismuth is a saffron-yellow powder, insoluble in water, alcohol, or ether, odorless, non-hydroscopic, astringent, non-poisonous, non-irritating, stable, unaffected by steam or dry heat in the process of sterilization. His laboratory experiments showed that in addition to its mechanical power of repelling water, and thus producing a food famine and consequent death of many of the bacteria, it has active powers in hindering bacterial growth, although it does not have bactericidal action. The method by which this hindrance is accomplished is probably due to its chemical combination with the ptomaïnes produced by the growth of the bateria, forming compounds hostile to their rapid development. In abscesses, when the cavity was thoroughly curetted and cleaned out, healing was favorably influenced. Superficial excoriations and burns, chronic moist eczematous ulcers of the leg, and irritations of the skin were advantageously treated. It is not apparently useful for the purpose of starting granulation when the wound has become sluggish; indeed, it is likely to increase this condition.—*Transactions of the Massachusetts Medical Society*, 1892.

### THE DANGER OF ADMINISTERING CHLOROFORM IN THE PRESENCE OF A NAKED FLAME.

MR. CHARLES MARTIN has remarked frequently, when chloroform was administered, a dry, irritating, spasmodic cough, gradually becoming more severe; smarting of the eyes; a pungent odor, somewhat resembling that of chloride of lime, and accompanied by a stinging sensation in the nostrils, and a sense of oppression in the chest amounting to actual distress; not infrequently changes in the patient's condition which cause great anxiety; sometimes synchronous weakening of the cardiac and respiratory mechanisms;

at other times embarrassed and stridulous respiration, cyanosis, and weakened pulse: these symptoms necessitating the use of ammonia, nitrite of amyl, or artificial respiration. It is believed that two molecules of chloroform combine in the presence of a flame with one molecule of carbonic anhydride and one of oxygen to produce three molecules of carbonyl chloride and one of water. The former, being unstable, is decomposed into hydrochloric acid and carbonic anhydride. In this hydrochloric acid lies the explanation of the symptoms and of the fact that ammonia is of great value as a restorative. The conclusion is that the operating-room should be heated by hot-water pipes, lighted by electricity, and should be large and well ventilated.—*Birmingham Medical Review*, 1892, No. 168, p. 83.

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### THE RESPONSIBILITY OF PHYSICIANS IN THE USE OF CHLOROFORM AND OTHER INHALED ANÆSTHETICS.

DR. PASSET formulates the rules for administration which should be carefully observed: 1. Before each narcosis there should be made a careful examination of the patient, and especially of the organs of circulation and respiration. 2. Chloroform should be only administered when well mixed with air. 3. The anæsthetic should be stopped with the advent of tolerance or at the disturbance of respiration or circulation. 4. The circulation and respiration should be continually watched, and at any disturbance of these functions the appropriate remedies should be used with discretion and energy; when death is imminent the artificial respiration and other methods of resuscitation should not be stopped too soon. 5. Both chloroform and ether narcosis are avoided during stomach-digestion, and tight clothing and false teeth are removed before it is begun. 6. No anæsthetic should be used which one knows, or which (after examination) one can know, to be impure. Whatever happens when all these rules have been carefully followed should not be laid to the physician, for *ultra posse nemo tenetur.*—*Münchener medicinische Wochenschrift*, 1882, No. 32, S. 567.

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### TROPA-COCAINE AS A LOCAL ANÆSTHETIC.

DR. ARTHUR P. CHADBOURNE prefers this term instead of tropsin to indicate a new coca-base, and this is suggestive of the relationship which exists between it and the alkaloids atropine and cocaine. Giesel isolated a new alkaloid from the leaves of a small-leaved coca plant of Java, which was proved by Liebermann to be benzoyl-pseudo-tropeïn, who succeeded in separating the pseudo-tropeïn, and then from it made benzoyl-pseudo-tropeïn synthetically. This pseudo-tropeïn is considered as chemically identical with that from the Hyoscyamus niger. This benzoyl-pseudo-tropeïn, which the author, deserving the gratitude of the profession, has named tropa-cocaine, is a powerful local anæsthetic, resembling, but not identical in local action with cocaine. In the eye it does not cause the ischæmia of the true anæsthetics (cocaine) nor the marked irritation and hyperæmia of the group of substances called by Liebreich *anæsthetica dolorosa;* but it is physiologically the connecting-link between them. The synthetical hydrochlorate of the base, if dissolved in physiological salt solution, seldom causes even a temporary smarting, or hyperæmia. As the alkaloid is almost insoluble, the hydrochlorate is used. His conclusions are that it causes complete local anæsthesia of the skin more quickly than cocaine; that this anæsthesia lasts longer than that of cocaine; that the extent is possibly greater; that a one-half of 1 per cent. tropa-cocaine solution causes in most cases marked diminution in cutaneous reflex near the point of injection. In a rabbit's eye it acts more quickly, and probably in weaker solution, and less constantly causes mydriasis than cocaine. He summarizes his results as follows:

1. Tropa-cocaine is less than one-half as toxic as cocaine. 2. The depressing action, both on the cardiac motor ganglia and the heart muscle, especially the latter, is much greater with cocaine. 3. Local anæsthesia, both of the eye and skin, is much more quickly complete with tropa-cocaine, and is possibly of longer duration. 4. Slight hyperæmia is occasionally present, but quickly disappears, whilst with cocaine only ischæmia is seen. 5. Mydriasis is usually absent, but always seems to be less than after cocaine. 6. Solutions of tropa-cocaine are moderately antiseptic, and retain their strength for at least two or three months. Cocaine solutions often begin to lose their activity when only three or four days old.

PROF. SCHWEIGGER found in clinical work that in the human eye the above conclusions were correct, save that the anæsthesia did not last so long as under cocaine.—*British Medical Journal*, 1892, No. 1651, p. 402.

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## TOXICOLOGY OF MALE FERN WITH SPECIAL REFERENCE TO VISUAL DISTURBANCE.

DRS. K. KATAYAMA and I. OKAMOTO have studied the reported cases of poisoning, more than twenty in number, which have occurred since 1881, and find that ten of these presented notable visual disturbances, five of these having occurred in Japan. Coincident with the increasing frequency of these cases has been the gradual raising of dosage, it being the general opinion of physicians that it was a harmless as well as an efficacious drug. From experiments, they conclude that it acts particularly upon the digestive system and nerve centres; that failure of vision occurs chiefly in persons in poor health (*cf.* alcohol or tobacco amaurosis). Practitioners should note: 1. That extract of male fern is better to be prescribed in small doses. 2. Being readily absorbed when mixed with oil, and even without oil, when it remains long in the alimentary canal, it must be followed by a cathartic other than castor oil. 3. Such symptoms as headache, amblyopia, should be watched for, and with their appearance the further use of the medicine stopped.—*Sei-i-Kwai Medical Journal*, 1892, No. 6, p. 101; No. 7, p. 121.

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The following papers are worthy of notice:

"On the Study of Indigenous Drugs" [of India], by SURGEON B. D. BASU, *Indian Medical Gazette*, 1892, No. 8, p. 225. A brief historical sketch based upon the study of the Rig-Veda, works of Charaka and Sashruta, Raja Nighantu, Madana Pâla Nighantu, Bkâva Prâkasha, and the writings of the European period of Indian history.

"The Treatment of Diabetes Mellitus," by DR. LENNÉ, *Münchener medi-*

*cinische Wochenschrift*, 1892, No. 34, S. 601. Recommends alkaline waters as far superior to all drugs.

"The Seventh Case of Traumatic Tetanus Cured by the Antitoxin of Tizzoni-Cattani," by DR. GIOVANNI CASALI, *Centralblatt für Bakteriologie und Parasitenkunde*, 1892, Nos. 2, 3, S. 56.

"A Case of Tetanus Successfully Treated with Tizzoni's Antitoxin," by DR. E. FINOTTI, *Wiener klinische Wochenschrift*, 1892, No. 30, S. 431. The reports of the use of the Tizzoni-Cattani antitoxin are becoming more and more frequent, and bear out the promise of success offered by the earlier cases.

"The Effect of the Quinines upon the Malarial Parasites and their Corresponding Febrile Attacks," by PROF. CAMILLO GOLGI, *Deutsche medicinische Wochenschrift*, 1892, No. 29, S. 663, and No. 30, S. 685. A valuable paper, exhaustive and practical.

## MEDICINE.

UNDER THE CHARGE OF

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### THE CHOLERA IN HAMBURG.

EUGENE FRAENKEL (*Deutsche medicin. Wochenschr.*, No. 36, p. 818) briefly relates the history of the recent epidemic of cholera in Hamburg. He denies the statement so generally made that there was any attempt at any time to suppress the facts or to conceal the true nature of the disease after it was recognized. Between the 17th and the 20th of August there occurred several fatal cases that presented symptoms suggestive of cholera. The first of these, examined on the 17th, proved, post-mortem, not to be a case of true cholera. On the 21st, five cases resembling this were admitted to the old Krankenhaus. Four of these terminated fatally. These facts were at once reported by the house physician to the proper authorities, and on the 22d were supplemented with the information that microscopic examination of the dejecta of these patients disclosed the presence of comma bacilli. On the same date a post-mortem examination was made in the case of a patient who had died in the new Krankenhaus with symptoms of cholera, in which an examination of the intestinal contents disclosed the presence of large numbers of comma bacilli. The case was reported to the health board. On the same date the diagnosis